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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/658,174	09/08/2000	Hiroki Ogata	SCEI 3.0-029	3464

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EXAMINER

COBURN, CORBETT B

ART UNIT	PAPER NUMBER
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3714

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/658,174

Applicant(s)

OGATA ET AL.

Examiner

Corbett B. Coburn

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-97 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-97 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-15 & 17-97 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Starting on page 14 of the specification, Applicant describes the calibration process for the controller. The specification describes exertion of a predetermined maximum pressure onto the control structure. Applicant fails to describe a method for accomplishing this.

Assume that the required maximum pressure is 10 pounds. Applicant has not explained how someone attempting to calibrate the device would be able to determine that exactly 10 pounds of force was being exerted on the control structure. The user might, for instance, press the button with 11 pounds of force or only 9.5 pounds. Since, as now claimed, the ability of a user to exert an exact amount of pressure is critical to Applicant's invention, Applicant must disclose a method for ensuring that this exact amount of pressure is exerted. Applicant has failed to do so.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-15 & 17-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVolpi (US Patent Number 6,067,005) in view of Schultz (US Patent Number 5,184,120).

Claim 1, 4, 18, 19, 31, 33, 37, 39, 43, 44, 50, 53, 66, 67, 79, 85, 87: DeVolpi teaches a controller (12) that can be pushed. There is a detecting device (22, 24) for outputting an analog signal in response to the pressure applied to the controller during normal operation of the controller. (Col 1, 15-20) There is an analog-to-digital that converts the analog signal into a bit stream and outputs it as a corresponding digital signal. (Col 3, 14-22) An analog-to-digital converter is a level-segmenting unit for segmenting the output level of the analog signal into a digital signal having a plurality of bits.

DeVolpi teaches that an elastic conductive element (18), which is also a resistor, moves with the controller (12) (Col 6, 36-37) and a conductive member (24) is disposed at a position where the conductive member is brought into and out of contact with the resistor and outputs the analog signal corresponding to the contact area between the resistor and the conductive member. (Col 7, 38-43)

DeVolpi fails to teach an initial calibrating pressure applied to the controller that provides a calibration signal that is divided into predetermined calibration levels based on the initial output level of the analog signals. Schultz teaches a device having a calibration routine in which the player inputs an initial calibration signal that is divided into predetermined calibration levels based on the initial output level of the analog signal. (Figs 2, 3) During the normal operation of the device, the output levels of the analog

signal is segmented into predetermined levels based on the initial value of the calibration signal. Schultz's calibration routine records a maximum pressure. (304) While Schultz does not describe a method of ensuring that the correct maximum pressure is attained, it does describe repeating the calibration procedures until the correct pressure is reached. (Col 4, 3-18) This means that there must be a predetermined initial calibrating force.

Calibration allows the operating program to assign signal levels to various amounts of pressure. This allows the user to control numerous features of an electronic device or computer program using a single input button. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified DeVolpi to include a calibration routine as described in Schultz in order to allow the player to control numerous features of an electronic device or computer program using a single input button.

The device renders the method of operation obvious.

Claims 2, 51: DeVolpi's detecting device (22, 24) is a pressure-sensitive device that is arranged at a position to which a pressure acting of the controller is transmitted to the detecting device. (Fig 1)

Claims 3, 32, 38, 52, 80, 86: DeVolpi teaches an elastic conductive member (18) that moves with the controller (12). There is a resistor (22) disposed to come into and out of contact with the elastic conductive member. The resistor outputs the analog signal corresponding to the contact area with the conductive member. (Col 7, 38-43) There is an analog-to-digital that converts the analog signal into a bit stream and outputs it as a corresponding digital signal. (Col 3, 14-22) An analog-to-digital converter is a level-

segmenting unit for segmenting the output level of the analog signal. Analog input forms a continuous curve; output from the analog-to-digital converter is in the form of a series of discrete steps or segments.

Claims 5, 20, 54, 68, 81: DeVolpi's conductive member (18) is deformed and has a contact area with the resistor in accordance with the contact pressure with the resistor. (Col 7, 38-43)

Claims 6, 21, 55, 69: DeVolpi's Fig 5 shows that each conductive member (28) has a peaked longitudinal-section surface.

Claims 7, 22, 56, 70: DeVolpi's Fig 5 shows that conductive members (28), taken as a group, have an essentially trapezoidal longitudinal-section surface.

Claims 8, 23, 34, 40, 57, 71, 82, 88, 93: DeVolpi's conductive member (18) has a cross-sectional area that decreases stepwise (i.e., gradually) toward a top portion that faces the resistor (22). Thus the resistance increases stepwise as the pressure increases.

Claims 9, 24, 58, 72: DeVolpi's conductive element (18) shown in Fig 1 has a spherical surface that faces the resistor (22).

Claims 10, 25, 35, 41, 59, 73, 83: DeVolpi's resistor (18) is formed in a shape that has a cross-sectional area that decreases stepwise (i.e., gradually) toward a top portion that faces the conductive member (24).

Claim 11, 26, 60, 74: DeVolpi's Fig 5 shows each resistor (28) has a peaked longitudinal-section surface.

Claims 12, 27, 61, 75: DeVolpi's Fig 5 shows resistors (28), taken as a group, have an essentially trapezoidal longitudinal-section surface.

Claims 13, 28, 62, 76: DeVolpi's resistive element (18) shown in Fig 1 has a spherical surface that faces the conductive surface (24).

Claims 14, 29, 63, 77, 89: DeVolpi's resistor (18) has a cross-sectional area that decreases stepwise (i.e., gradually) toward a top portion that faces the resistor (24).

Claims 15, 30, 36, 42, 45, 64, 78, 84, 90: DeVolpi's conductive member (18) is deformed in accordance with a contact pressure with the resistor (22) and the contact area between the resistor and conductive element is changed. The resistor (22) divides a contact region of the conductive member (18) and the contact area increases stepwise (i.e., gradually) as the deformation increases. Fig 3 clearly shows that the resistor (22) has non-conductive regions (the spaces between the lines) such that the area of contact increases stepwise.

Claim 17, 46-49, 65, 91, 92, 94-97: DeVolpi teaches an input device with a resistor and an elastic conductive member that moves together with the controller for contacting the resistor (and vice versa). The maximum output level of DeVolpi's device correlates to the maximum applied pressure. DeVolpi does not teach a calibration routine.

DeVolpi fails to teach an initial calibrating pressure applied to the controller that provides a calibration signal that is divided into predetermined calibration levels based on the initial output level of the analog signals. Schultz teaches a device having a calibration routine in which the player inputs an initial calibration signal that is divided into predetermined calibration levels based on the initial output level of the analog signal. (Figs 2, 3) During the normal operation of the device, the output levels of the analog signal is segmented into predetermined levels based on the initial value of the calibration

signal. Schultz's calibration routine records a maximum pressure. (304) While Schultz does not describe a method of ensuring that the correct maximum pressure is attained, it does describe repeating the calibration procedures until the correct pressure is reached. (Col 4, 3-18) This means that there must be a predetermined initial calibrating force. Calibration allows the operating program to assign signal levels to various amounts of pressure. This allows the user to control numerous features of an electronic device or computer program using a single input button. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified DeVolpi to include a calibration routine as described in Schultz in order to allow the player to control numerous features of an electronic device or computer program using a single input button.

Response to Arguments

5. Applicant's arguments with respect to claims 1-15 & 17-97 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reference Name	US Patent Number	Applicability
Landsness	3,585,840	Calibration device for force sensors
Takatuka et al.	6,717,568	Game Controller
Ogata et al.	6,617,982	Game Controller
Ogata et al.	6,509,848	Game Controller
Zimmerman et al.	6,437,772	Game Controller
Nassimi	5,790,102	Game Controller

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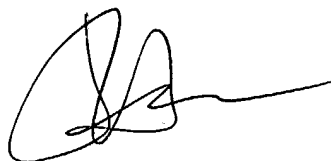
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corbett B. Coburn whose telephone number is (703) 305-3319. The examiner can normally be reached on 8-5:30, Monday-Friday, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's primary, Jessica Harrison can be reached on (703) 308-2217. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



cbc



JESSICA HARRISON
PRIMARY EXAMINER